Atypical Mycobacterial infection

FRCS Bitesize Paediatrics

Gloucester SpR training day

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Format

Theme/Topic:

• Scenario:

• Introductory/Focus question:
  • Points for discussion:

• Competence Question(s):
  • Points for discussion:

• Advanced Question (s):
  • Points for discussion:
Scenario
• Introductory question:

• Describe

• Differential diagnosis

• Competence question:

• How would you manage this patient?

• Advanced question:

• Surgical vs. Medical, pros and cons, any evidence?
To get a 6

- Focussed description
- Top differentials
- Focussed history
- Full ENT examination
- ? Investigations
- Discuss treatment options
- A plan
- Atypical mycobacterium is found naturally in soil and water environments (shower heads)
- No airborne human-human transfer
- *Mycobacterium avium complex*, *m. scrofulaceum*, *m. haemophilum*
- Children aged 1-5, soil ingestion, teeth eruption, the gingiva and oropharyngeal mucosa are thought to be portal sites
- First echelon nodes (submandibular and parotid), persistent cervical lymphadenopathy, subacute history (2-6 weeks) not responding to antibiotics

**Violet skin discoloration, cold subcutaneous abscess**

- Skin breakdown with discharge. Eventually, healing and scarring (months to years)
- Clinical diagnosis. I&D, FNA cause skin breakdown, unsightly scarring
- Differential: TB, cat scratch disease, toxoplasmosis, CMV, EBV, staph and/or strep species, Lyme disease, Brucellosis, HIV, congenital neck masses and lymphoma
- CXR, USS, CT usually unnecessary unless suspicious or planning extensive surgery
To get 7 or the mighty 8

- Medical treatment with clarythromycin +/- rifampicin (side effects)
- Surgical treatment (excision, curettage, supraomohyoid neck dissection, parotidectomy) (complications)

Evidence:

- **Schaad et al.** 380 cases, 92% cure rate with surgery
  10% cured with medical only treatment
  95% cure rate combined therapy with surgical excision and antibiotics

- **Lindeboom et al.** prospective randomized study, 50 patients randomized to surgical excision, 50 patients randomized to 12 weeks of clarithromycin and rifabutin.
  96% cure rate for surgery
  66% cure rate for antibiotic therapy of which the remaining 34% required surgery
  1 patient had a permanent facial nerve paresis of a HB score of II. 1 patient had recurrence
  Antibiotic therapy was not without side effects which included fever, fatigue, and abdominal pain
Conclusion

- In children, atypical mycobacterium manifests most commonly as a cervicofacial lymphadenitis in the submandibular region. It occurs more commonly in children between 1 to 5 years old.

- The diagnosis is usually clinical

- MAC is the most common pathogen isolated ahead of M. scrofulaceum and M. haemophilum

- Suspicion of atypical mycobacterial etiology of cervicofacial lymphadenitis should warrant surgical excision of all affected lymph nodes

- Medical therapy with antibiotics is inferior to surgery

- Incision and drainage should not be done as there is high probability of recurrence and chronic sinus tract with drainage

- Adjuvant antibiotic has not proven to improve outcome of this disease.
Further reading


